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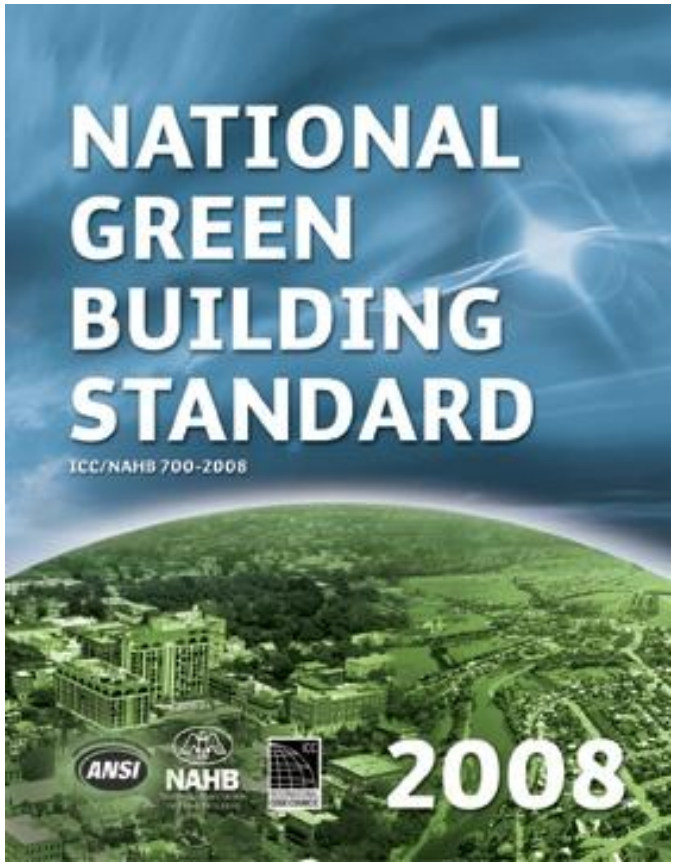
An Introduction to the National Green Building Standard

ICC 700-2008



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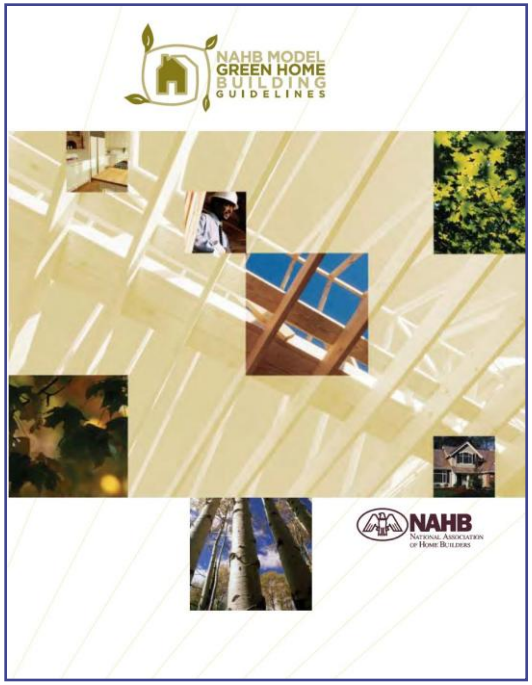
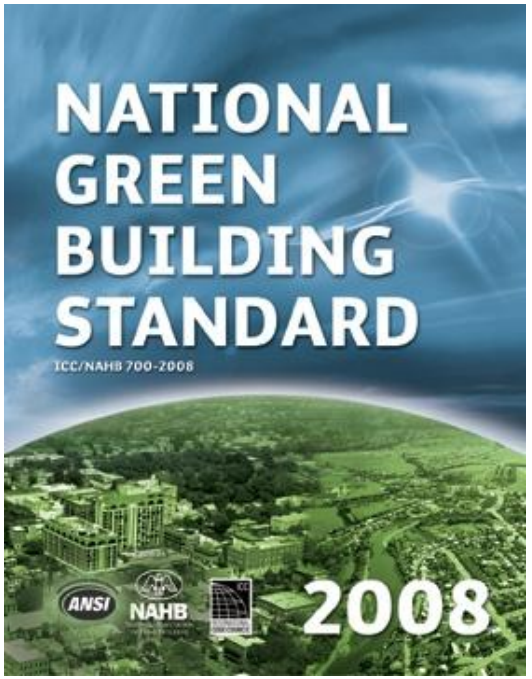
Guidelines vs. Standard



vs.



An Overview

- First ANSI Consensus Standard on Sustainable Green Building for Residential Construction
- Collaborative Effort between ICC and NAHB

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The Green Practices in the Standard Can be Incorporated into

- ⇨ Single-Family Detached Homes
- ⇨ Single-Family Attached Homes
- ⇨ Multi-Family Buildings
- ⇨ Home Remodeling and Additions
- ⇨ Hotels and Motels
- ⇨ Site Development

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The Green Practices include

- ⇨ Site Design and Development
- ⇨ Lot Design, Preparation and Development
- ⇨ Resource Efficiency
- ⇨ Energy Efficiency
- ⇨ Water Efficiency
- ⇨ Indoor Environmental Quality
- ⇨ Operation, Maintenance, and Building Owner Education

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The Standard is Organized into 10 Chapters

- ⇨ Chapter 1 - Scope and Administration
- ⇨ Chapter 2 - Definitions
- ⇨ Chapter 3 - Compliance Method
- ⇨ Chapter 4 - Site Design and Development
- ⇨ Chapter 5 - Lot Design, Preparation, and Development
- ⇨ Chapter 6 - Resource Efficiency
- ⇨ Chapter 7 - Energy Efficiency
- ⇨ Chapter 8 - Water Efficiency
- ⇨ Chapter 9 - Indoor Environmental Quality
- ⇨ Chapter 10 - Operation, Maintenance, and Building Owner Education

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Chapter 1 - Scope and Administration

Chapter 2 - Definitions

Chapter 3 - Compliance Method

Environmental Performance Levels

Mandatory Requirements plus

Points assessed using the point system

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Chapter 3 – Compliance Method

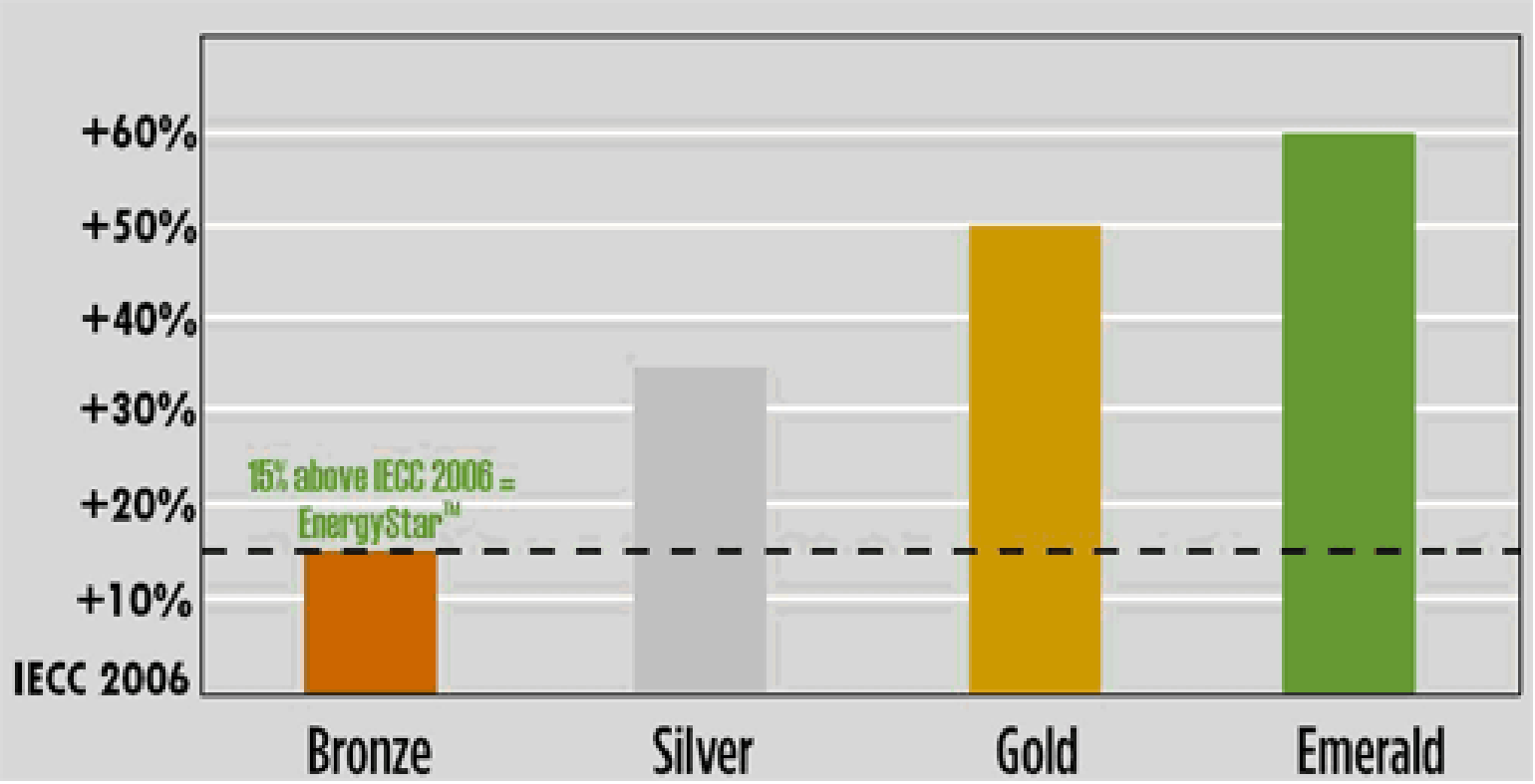

Table 302

Threshold Point Ratings for Site Design and Development

Green Subdivision Category		Performance Level Points			
		One Star	Two Stars	Three Stars	Four Stars
Chapter 4	Site Design and Development	79	104	134	175

Table 303

Threshold Point Ratings for Green Buildings

Green Building Categories			Performance Level Points (1) (2)			
			Bronze	Silver	Gold	Emerald
1	Chapter 5	Lot Design, Preparation and Development	39	66	93	118
2	Chapter 6	Resource Efficiency	45	79	113	146
3	Chapter 7	Energy Efficiency	30	60	100	120
4	Chapter 8	Water Efficiency	14	26	41	60
5	Chapter 9	Indoor Environmental Quality	36	65	100	140
6	Chapter 10	Operation, Maintenance and Building Owner Education	8	10	11	12
7		Additional Points from any category	50	100	100	100
		Total Points	222	406	558	697

(1) In addition to the threshold number of points in each category, all mandatory provisions of each category shall be implemented.

(2) For dwelling units greater than 4,000 square feet (372 m^2), the number of points in Category 7 (Additional Points from any category) shall be increased in accordance with Section 601.1. The “Total Points” shall be increased by the same number of points.

Table 305.5

Threshold Ratings for Green Remodels

Green Remodel Practice	Performance Level			
	BRONZE	SILVER	GOLD	EMERALD
Reduction in energy and water consumption in accordance with Section 305.5.5	20%	34%	43%	50%

Chapter 4 – Site Design and Development

401 Site Selection
402 Project Team, Mission Statement, and Goals
403 Site Design
404 Site Development and Construction
405 Innovative Practices

Chapter 5 - Lot Design, Preparation and Development

501 Lot Selection
502 Project Team, Mission Statement, and Goals
503 Lot Design
504 Lot Construction
505 Innovative Practices

Chapter 6 – Resource Efficiency

601 Quality of Construction Materials and Waste
602 Enhanced Durability and Reduced Maintenance
603 Reused or Salvaged Materials
604 Recycled Content Building Materials
605 Recycled Construction Waste
606 Renewable Materials
607 Resource-Efficient Materials

Chapter 6 – Resource Efficiency

608 Indigenous Materials
609 Life Cycle Analysis
610 Innovative Practices

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Chapter 6 – Resource Efficiency

601 Quality of Construction Materials and Waste

601.1 Conditioned Floor Area
601.2 Material Usage
601.3 Building Dimensions and Layout
601.4 Framing and Structural Plans
601.5 Stacked Stories
601.6 Site Applied Finishing Materials
601.7 Foundations
601.8 Above-Grade Wall Systems

Chapter 6 – Resource Efficiency

602 Enhanced Durability and Reduced Maintenance

602.1 Exterior Doors
602.2 Roof Overhangs
602.3 Foundation Drainage
602.4 Drip Edge
602.5 Roof Water Discharge Systems
602.6 Finished Grade
602.7 Termite Barrier
602.8 Termite Resistant Materials
602.9 Water-Resistive Barrier

Chapter 6 – Resource Efficiency

602 Enhanced Durability and Reduced Maintenance

602.10 Ice Barrier
602.11 Foundation Waterproofing
602.12 Flashing
602.13 Roof Surfaces
602.14 Recycling

Chapter 6 – Resource Efficiency

603 Reused or Salvaged Materials

603.1 Reuse of Existing Building
603.2 Salvaged Materials
603.3 Scrap Materials

Chapter 6 – Resource Efficiency

604 Recycled Content Building Materials

604.1 Recycled Content

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Chapter 6 – Resource Efficiency

605 Recycled Construction Waste

605.1 Construction Waste Management Plan
605.2 On-site Recycling
605.3 Recycled Construction Materials

Chapter 6 – Resource Efficiency

606 Renewable Materials

606.1 Bio-based Products
606.2 Wood-based Products
606.3 Manufacturing Energy

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Chapter 6 – Resource Efficiency

607 Resource-Efficient Materials

607.1 Resource-efficient Materials

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Chapter 6 – Resource Efficiency

608 Indigenous Materials

608.1 Indigenous Materials

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Chapter 6 – Resource Efficiency

609 Life Cycle Analysis

609.1 Life Cycle Analysis

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Chapter 6 – Resource Efficiency

610 Innovative Practices

610.1 Manufacturer's Environmental Management System Concepts

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Chapter 7 – Energy Efficiency

701 Minimum Energy Efficiency Requirements
702 Performance Path
703 Prescriptive Path
704 Additional Practices
705 Innovative Practices

Chapter 7 – Energy Efficiency

701 Minimum Energy Efficiency Requirements

701.1 Mandatory Requirements
701.2 Emerald Level Points
701.3 Adopting Entity Review
701.4 Mandatory Practices
701.4.1 HVAC Systems
701.4.2 Duct Systems
701.4.3 Insulation and Air Sealing
701.4.4 Fenestration

Chapter 7 – Energy Efficiency

702 Performance Path

702.1 Point Allocation
702.2 Energy Cost Performance Levels

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Chapter 7 – Energy Efficiency

703 Prescriptive Path

703.1 Building Envelope
703.2 Insulation and Air Sealing
703.3 Fenestration
703.4 HVAC Equipment Efficiency
703.5 Water Heating Design, Equipment, and Installation

Chapter 7 – Energy Efficiency

704 Additional Practices

704.1 Application of Additional Practice Points
704.2 Lighting and Appliances
704.3 Renewable Energy and Solar Heating and Cooling
704.4 Ducts
704.5 HVAC Design and Installation
704.6 Installation and Performance Verification

Chapter 7 – Energy Efficiency

705 Innovative Practices

705.1 Energy Consumption Control
705.2 Renewable Energy Service Plans

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Chapter 8 – Water Efficiency

801 Indoor and Outdoor Water Use
802 Innovative Practices

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Chapter 8 – Water Efficiency

801 Indoor and Outdoor Water Use

801.1 Indoor Hot Water Usage
801.2 Water Conserving Appliance
801.3 Food Waste Disposers
801.4 Showerheads
801.5 Faucets
801.6 Water Closets and Urinals
801.7 Irrigation Systems
801.8 Rainwater Collection and Distribution
801.9 Water Filters

Chapter 8 – Water Efficiency

802 Innovative Practices

802.1 Gray Water
802.2 Composting or Waterless Toilets and/or Urinals
802.3 Automatic Shut Off Water Devices

Chapter 9 – Indoor Environmental Quality

901 Pollutant Source Control
902 Pollutant Control
903 Moisture Management: Vapor, Rainwater, Plumbing, HVAC
904 Innovative Practices

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Chapter 9 – Indoor Environmental Quality

901 Pollutant Source Control

901.1 Space and Water Heating Options
901.2 Fireplaces and Fuel Burning Appliances
901.3 Garages
901.4 Wood Materials
901.5 Carpets
901.6 Hard-surface Flooring
901.7 Wall Coverings
901.8 Architectural Coatings
901.9 Adhesives and Sealants

Chapter 9 – Indoor Environmental Quality

901 Pollutant Source Control

901.10 Cabinets
901.11 Insulation
901.12 Carbon Monoxide Alarms
901.13 Building Entrance Pollutants Control
901.14 Non-smoking areas
901.15 Renovation Note (Lead based paint)

Chapter 9 – Indoor Environmental Quality

902 Pollutant Control

902.1 Spot Ventilation
902.2 Building Ventilation Systems
902.3 Radon Control
902.4 HVAC System Protection
902.5 Central Vacuum Systems
902.6 Living Space Containments

Chapter 9 – Indoor Environmental Quality

903 Moisture Management: Vapor, Rainwater, Plumbing, HVAC

903.1 Tile Backing Materials
903.2 Capillary Breaks
903.3 Crawl Spaces
903.4 Moisture Control Measures
903.5 Plumbing
903.6 Duct Insulation
903.7 Relative Humidity

Chapter 9 – Indoor Environmental Quality

904 Innovative Practices

904.1 Humidity Monitoring System
904.2 Kitchen Exhaust
904.3 Renovation Note

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Chapter 10 – Operation, Maintenance, and Building Owner Education

1001 Building Owner's Manual for One and Two-Family Dwellings
1002 Training of Building Owners on Operation and Maintenance for One and Two Family Dwellings and Multi-Unit Buidings
1003 Construction, Operation, and Maintenance Manuals and Training for Multi-Unit Buildings
1004 Innovative Practices

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What is your primary motivation for wanting to build a "Green" home?

- Energy savings & lower energy bills
- Real or perceived health benefits
- Belief that helping the environment is not only your responsibility but that you can make a difference.

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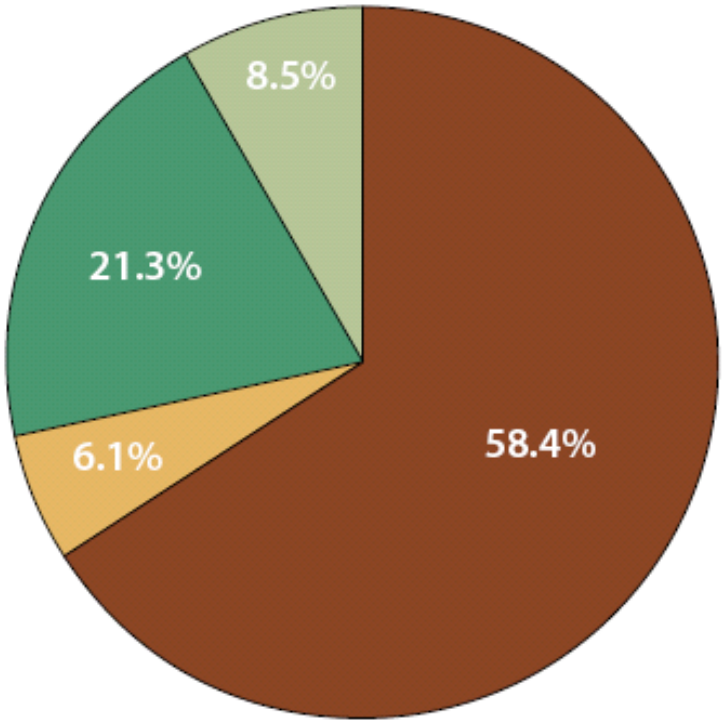
Greenback Greens

Healthy Greens

Forest Greens

Others



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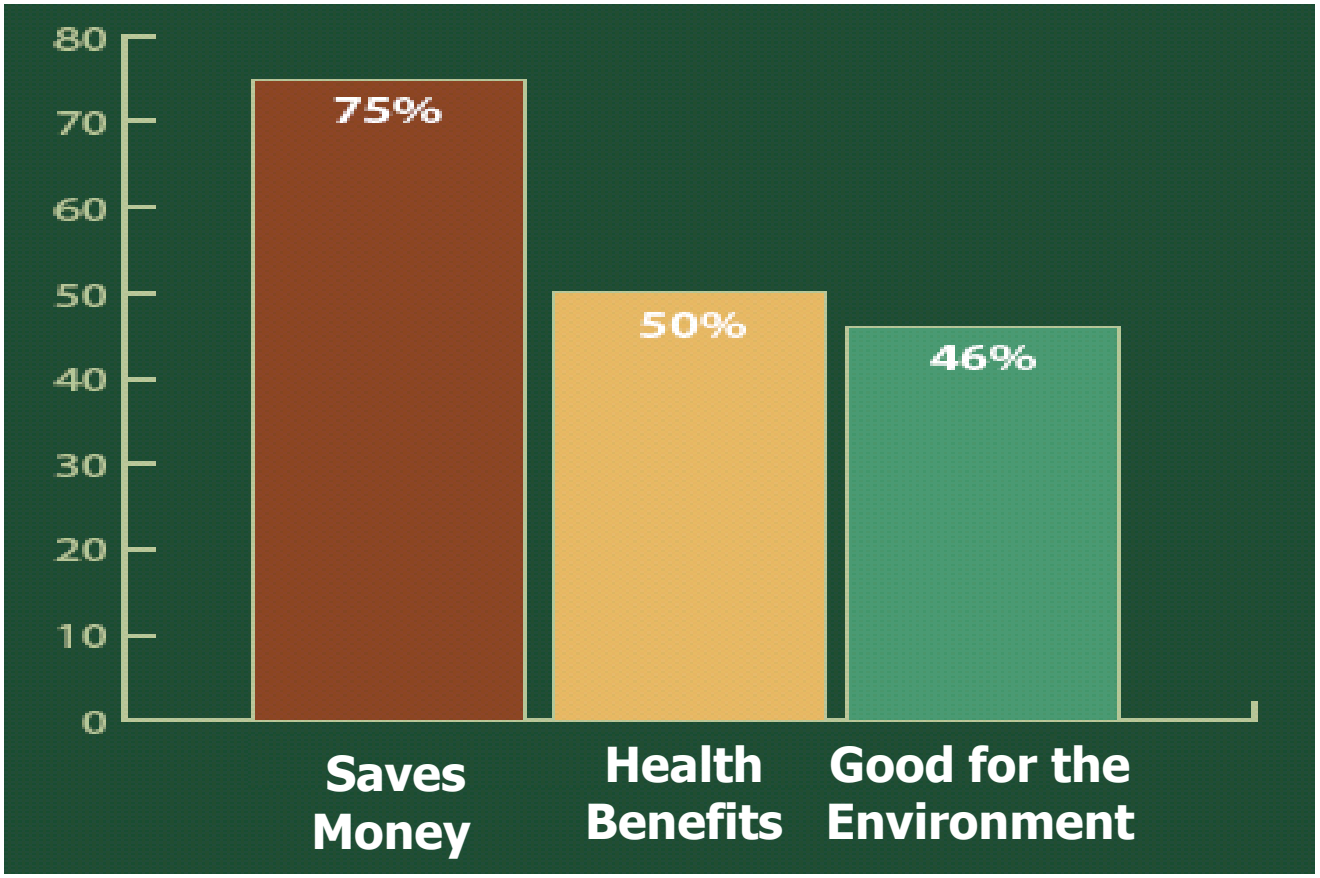
Are you willing to spend additional money for the benefits associated with a green home?

- If you can recoup your cost over time?
- How much time?



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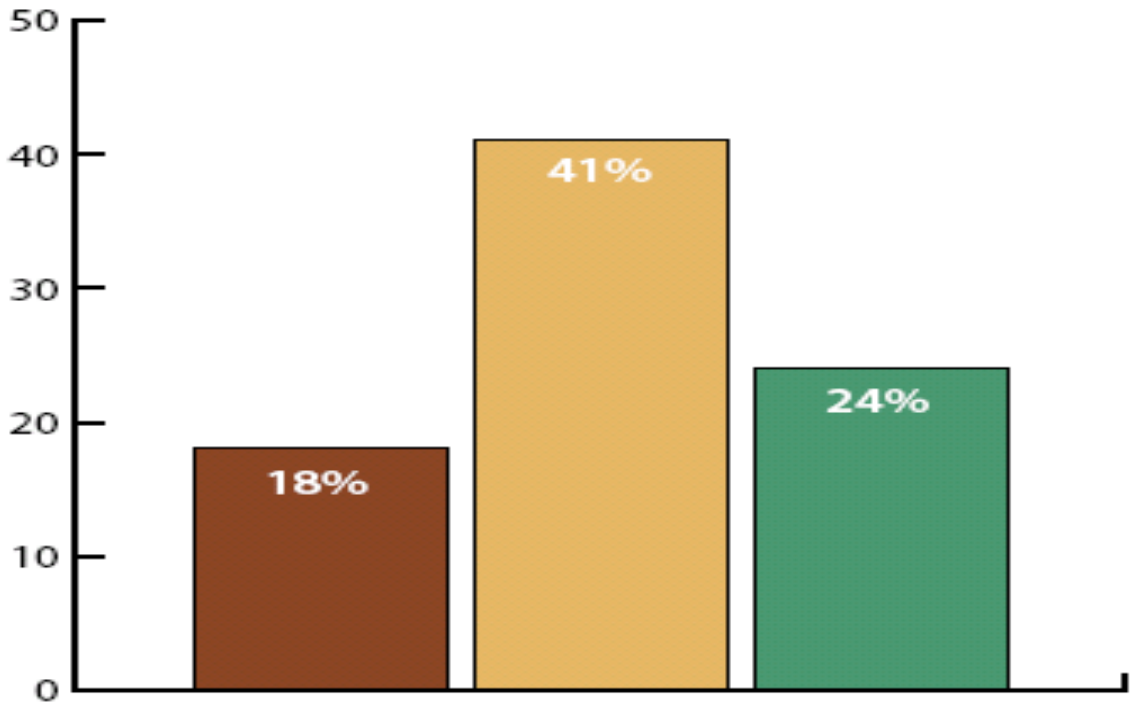
What if you can't recoup your cost?

Are you still willing to spend additional money for the benefits associated with a green home?



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Any Questions?

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